WHAT IS CLAIMED IS:

1. An optical transmitting/receiving method in transmitting/receiving optical beams including optical signals via a space transmission path between an optical transmitting apparatus and an optical receiving apparatus, wherein:

a degree of spread of the optical beam emitted from the optical transmitting apparatus to the optical receiving apparatus is varied according to a predetermined condition.

2. The optical transmitting/receiving method as claimed in claim 1, wherein:

the degree of spread of the optical beam is varied according to conditions defined on the basis of a state of the space transmission path between the optical transmitting apparatus and the optical receiving apparatus.

3. The optical transmitting/receiving method as claimed in claim 2, wherein:

the degree of spread of the optical beam is varied according to a condition that at the optical receiving apparatus the received level of the optical beam depending on the state of the space propagation path is constant.

4. An optical transmitting/receiving system comprising an optical transmitting apparatus and an optical receiving apparatus at which an optical beam including optical signals transmitted from the optical transmitting apparatus via a space transmission path is received, wherein:

the optical transmitting apparatus comprises a beam size controlling part for varying a degree of spread of the optical beam emitted to the optical receiving apparatus according to a predetermined condition.

5. The optical transmitting/receiving system as claimed in claim 4, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to conditions defined on the basis of a state of the space transmission path between the optical transmitting apparatus and the optical receiving apparatus.

6. The optical transmitting/receiving system as claimed in claim 5, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to a condition that at the optical receiving apparatus the received level of the optical beam depending on the state of the space propagation path is constant.

7. An optical communication network comprising a plurality of communication nodes each provided with a function of transmitting and receiving optical signals and connected by optical transmission paths, wherein:

at least one of the optical transmission paths connecting two of the communication nodes is configured as an optical space transmission path,

at least one of the two communication nodes comprises a beam size controlling part for varying a degree of spread of the optical beam emitted to the other communication node of the two according to a predetermined condition.

8. The optical communication network as claimed in claim 7, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to conditions defined on the basis of a state of the space transmission path.

9. The optical communication network as claimed in claim 8, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to a condition that at the receiving communication node the received level of the optical beam depending on the state of the space propagation path is constant.

10. An optical communication network comprising a plurality of communication nodes each provided with a function of transmitting and receiving optical signals and connected by optical transmission paths, the optical communication network further comprising:

a first communication path comprising at least one communication node and a plurality of optical fiber transmission paths, and a second communication path that is an optical space transmission path, between a first communication node and a second communication node.

11. The optical communication network as claimed in claim 10, wherein:

at least one of the first communication node and the second communication node has a path switching part for switching selectively between the first communication path and the second communication path.

12. The optical communication network as claimed in claim 11, wherein:

the path switching part selectively switches between the first communication path and the second communication path according to an amount of communication traffic in the first communication path.

13. The optical communication network as claimed in claim 12, wherein:

at least one of the first communication node and the second communication node comprise a beam size controlling part for varying a degree of spread of the optical beam emitted on the optical space transmission path that is the second communication path according to a predetermined condition.

14. The optical communication network as claimed in claim 13, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to conditions defined on the basis of a state of the space transmission path.

15. The optical communication network as claimed in claim 14, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to a condition that at the receiving node that is either of the first communication node or the second communication node the received level of the optical beam depending on the state of the space propagation path is constant.

16. An optical communication network comprising at least two sub-networks each including a plurality of communication nodes each provided with a function of transmitting and receiving optical signals, which have no direct optical fiber links among the sub-networks, and a backbone network connecting the sub-networks, the optical communication network further comprising:

a first communication path through the backbone network, and a second communication path that is an optical space transmission path, between a first communication node included in one of the sub-networks and a second communication node included in another one of the sub-networks.

17. The optical communication network as claimed in claim 16, wherein:

at least one of the first communication node and the second communication node has a path switching part for switching selectively between the first communication path and the second communication path.

18. The optical communication network as claimed in claim 17, wherein:

the path switching part selectively switches between the first communication path and the second communication path according to an amount of communication traffic in the first communication

path.

19. The optical communication network as claimed in claim 18, wherein:

at least one of the first communication node and the second communication node comprise a beam size controlling part for varying a degree of spread of the optical beam emitted on the optical space transmission path that is the second communication path according to a predetermined condition.

20. The optical communication network as claimed in claim 19, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to conditions defined on the basis of a state of the space transmission path.

21. The optical communication network as claimed in claim 20, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to a condition that at the receiving node that is either of the first communication node or the second communication node the received level of the optical beam depending on the state of the space propagation path is constant.

22. An optical communication network comprising a plurality of communication nodes each provided with a function of transmitting and receiving optical signals and partially connected by optical transmission paths, the optical communication network further comprising:

an optical space transmission path provided between a first communication node having optical fiber transmission paths to other communication nodes and a second communication node having no optical fiber transmission paths to other communication nodes.

23. The optical communication network as claimed in claim 22, wherein:

at least one of the first communication node and the second communication node comprise a beam size controlling part for varying a degree of spread of the optical beam emitted on the optical space transmission path that is the second communication path according to a predetermined condition.

24. The optical communication network as claimed in claim 23, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to

conditions defined on the basis of a state of the space transmission path.

25. The optical communication network as claimed in claim 24, wherein:

the beam size controlling part varies the degree of spread of the optical beam according to a condition that at the receiving node that is either of the first communication node or the second communication node the received level of the optical beam depending on the state of the space propagation path is constant.